CLAIMS

1. Peptide molecule able to interfere with the HLH domain of TAL-1, consisting of or comprising at least 10 successive amino acids and, preferably, at least 15 successive amino acids from the HLH domain of TAL-1 of sequence:

QQNVNGAFAELRKLIPTHPPDKKLSKNEILRLAMKYINFLA

corresponding to SEQ ID No. 1 in the list of sequences in the appendix or an equivalent sequence.

2. Peptide molecule according to claim 1, characterised in that it consists of or comprises a sequence chosen from among the following sequences:

- QQNVNGAFAELRKLIPTHPPDKKLSKNEILRLAMKYINFLA (SEQ ID No. 1 in the list of sequences in the appendix),
- VRRIFTNSRERWRQQNVNGAFAELRKLI (SEQ ID No. 2 in the list of sequences in the appendix) and
- PTHPPDKKLSKNEILRLAMKYINFLA (SEQ ID No. 3 in the list of sequences in the appendix)

or a sequence equivalent to the said sequences.

3. Peptide molecule according to any of claims 1 or 2, characterised in that it is associated with a vector.

4. Peptide molecule according to claim 3, characterised in that the said vector is chosen from among the group comprising:

- a linear peptide derived from protegrins or tachyplesins,
- a linear peptide comprising a domain of transduction such as the domains of transduction of the Tat protein of HIV-1 and the domains of transduction derived from the third helix of Antennapedia,
- particles such as the liposomes,
- polymers such as polyethylene glycol (PEG).

5. Peptide molecule according to any of claims 3 or 4, characterised in that the said vector is a linear peptide derived from Protegrins, complying with formula (I) as follows:

BX(X or B)BXXXXBBBXXXXXXB (I)

or a linear peptide derivative of Tachyplesin, complying with the following formula (II):

(B or X)XXXBXXXBXXXXBBXB (II),

in which:

- the identical or different B groups, representing an amino acid residue whose lateral chain bears an alkaline group, and
- the identical or different X groups, representing an aliphatic or aromatic amino acid residue

or a fragment of them consisting of a sequence of at least 5 and preferably at least 7 successive amino acids of formulae (I) or (II).

6. Peptide molecule according to any of claims 3 to 5, characterised in that the bond between the said molecule and the said vector is chosen from among a covalent bond, a hydrophobic bond, an ionic bond, a cleavable bond or a non cleavable bond in the physiological media or inside the cells.

7. Peptide molecule according to claim 6, characterised in that the said bond may be either direct or indirect by means of a linker and carried out by means of a functional group that is naturally present or introduced either on the vector or on the inhibitor, or on both.

8. Peptide molecule according to any of the previous claims, characterised in that it is chosen from among the following two compounds:

- compound 4:

- compound 5:

9. Pharmaceutical composition comprising at least one peptide molecule as active ingredient according to any one of the previous claims, advantageously associated in the said composition with an acceptable vehicle.

10. Pharmaceutical composition according to claim 9, characterised in that it is present in an appropriate form for a parenteral, oral, rectal, nasal, transdermal, pulmonary or central administration.

11. Use of a compound able to inhibit the interaction between the HLH domain of TAL-1 and its partner E47 for the penetration of a drug intended for the prevention and/or treatment of diseases related to angiogenesis and, preferably, the treatment of cancers, arteriosclerosis and diabetes.

12. Use according to claim 11, characterised in that the said compound is a competitive inhibitor of the HLH domain of TAL-1.

13. Use according to any of claims 11 or 12, characterised in that the said compound is a peptide molecule as defined in any of claims 1 to 8.

14. Use according to claim 11, characterised in that the said compound is a compound able to inhibit the fixation of TAL-1 on its partner E47.

15. Use according to any of claims 11 or 14, characterised in that the said compound is an antibody recognising either an epitope at the level of the HLH domain of TAL-1, or an epitope at the HLH domain of E47.

16. Method to identify a biologically active compound likely to be used in the prevention and/or treatment of diseases related to angiogenesis and, preferably, the treatment of cancers, arteriosclerosis and diabetes consisting of detecting the inhibition of the interaction between the HLH domain of TAL-1 and its partner E47 in the presence of the said compound.

17. Method according to claim 16, characterised in that the said method comprises the following stages:

(a) putting into contact protein TAL-1 (or a fragment of this protein comprising the HLH domain), transcription factor E47 (or a fragment of this factor comprising the HLH domain) and the biologically active compound to test,

(b) immunoprecipitate either the HLH protein HLH (or a fragment of this protein comprising the HLH domain) or transcription factor E47 (or a fragment of this factor comprising the HLH domain),

(c) if, at stage (b), the TAL-1 protein (or a fragment of this protein comprising the HLH domain) is immunoprecipitated, detect in the immunoprecipitate obtained in stage (b), the presence of a transcription factor E47 (or a fragment of this factor comprising the HLH domain),

(d) if, in stage (b), transcription factor E47 (or a fragment of this factor comprising the HLH domain) is immunoprecipitated, detect in the immunoprecipitate obtained in stage (b), the presence of protein TAL-1 (or a fragment of this protein comprising the HLH domain),

in the case where transcription factor E47 (or a fragment of this factor comprising the HLH domain) is not present in stage (c) or if protein TAL-1 (or a fragment of this protein comprising

the HLH domain) is not present in stage (d), the said compound is an agent likely to be used in the prevention and/or treatment of diseases related to angiogenesis and, preferably, the treatment of cancers, arteriosclerosis and diabetes.

18. Method according to claim 16, characterised in that the said method comprises the following stages:

(a') put into contact the TAL-1 protein (or a fragment of this protein comprising the HLH domain), transcription factor E47 (or a fragment of this factor comprising the domain that interacts with TAL-1) and the biologically active compound to test,

(b') make migrate on a non denaturant polyacrylamide gel the mixture obtained in stage (a'),

(c') visualise the absence or presence of the TAL-1 complex (or a fragment of this protein comprising the HLH domain) and E47 (or a fragment of this factor comprising the domain that interacts with TAL-1).